

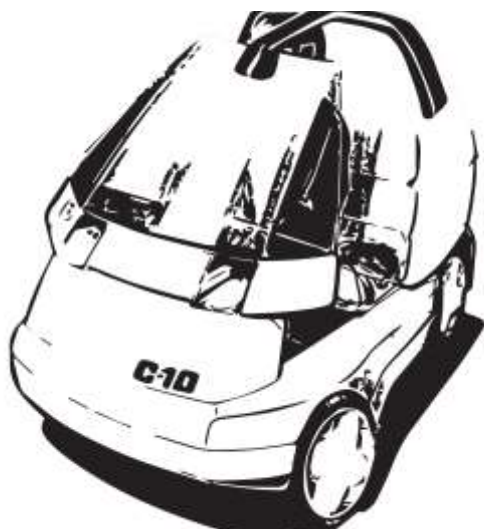
VOLUME 32 : ISSUE 3

JUN JUL 2015

QL

QUANTA

THE DEFINITIVE QL MAGAZINE



**EDITORIAL**

**NEWS**

**MASTERMIND**

**TSP UPDATE**

**CHAIRMAN'S NOTES**

**MEMBERSHIP REPORT**

**HELPLINE**

**COPYDATE**



# QUANTA

## INFORMATION ON THE ASSOCIATION

Membership of QUANTA, the independent QL user group, is by annual subscription. The Membership Secretary can supply full details. Copies of the association's constitution & annual accounts are available from the Secretary.

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[www.QUANTA.org.uk](http://www.QUANTA.org.uk)

*Find us on the QL Forum :*

[www.qlforum.co.uk/](http://www.qlforum.co.uk/)

*'Like' us on Facebook at :*

[www.Facebook.com/QUANTA.org](http://www.Facebook.com/QUANTA.org)

**T**he holiday season is with us and if you are taking one this year, I hope you maximise and enjoy a well earned rest and relaxation or a hyperactive adventure. Whatever you chose as a method of not working for awhile, taking electronic or paper copies of the magazine is a must to refresh your QL need.

Following a comment from the last issue we are trying a slightly modified listing format that hopefully makes it easier to read. In addition, listings in zip form will now be available from the QUANTA Members section for download. It is hope to make the listings available shortly after the magazine has been officially issued. In the event of a program listing spanning more than one issue, it will only be made available once the complete article and listing have been published. Let us know what you think!

You may be wondering what the image on the front cover is about, and for those who are not old enough, this was the possible Sinclair vehicle that gave me the greatest anticipate expectations. Labelled the C10 and a four wheeled version of the C5.

Unfortunately the bubble burst and it was no longer realised. However it is there on the front cover as a reminder as what might have been and that there has been recent activity from the Sinclair stable in the form of what I perceive is a very expensive bicycle. See for yourself here: <http://sinclairinnovation.com/>.

A recent discussion on one of the posts on the QL Forum noted code I used using the letter 'f' as the variable for a FOR NEXT loop. This is and always has been my de facto standard when

creating loops of this kind, whether FOR NEXT or FOR END FOR loops. It stems from the ZX Spectrum days of programming and Sinclair's tokenised BASIC. The pressing of the letter F on the rubberised keyboard produced (in programming mode) FOR, as part of the FOR NEXT loop. Pressing the same key again produces the first letter variable used in a FOR NEXT loop and the quickest way to create one and hence my use ever since.

FOR f = 1 TO 10 would normally require 15 key strokes including spaces, the tokenised ZX BASIC reduced this count and using 'f' reduced the need for thinking for a variable to an easily excitable Spectrum programmer. When nesting loops, my first would now always be FOR F =, while the inner loop would obviously be FOR G =, as it is the next letter in the alphabet.

Similarly the LET statement, "LET I" was my quickest method for that statement, which brings me to my latest acquisition. Since I returned to the QL world, I have endeavoured either consciously or subconsciously, to obtain all the Sinclair Spectrum & QL equipment I originally had in the 1980s. One such recent acquisition is a programming listing book entitled "Over the Spectrum" published by Melbourne house.

When I first copied the listing for a 3D maze game from the book, it didn't work. The listings in the book are actual printouts using a bespoke printer but not with a Sinclair Spectrum font, so I assumed it was correct and I had typed the listing incorrectly. This prompted a time consuming scan and pouring over the program I entered and the listing in the book.

The line where the error occurred didn't not indicate anything untoward (I forget the actual error now) but obviously I checked

and checked that line with diligence to no avail. To cut a long story shorter, I found the error about two months later. This was due to three things, screen fonts on the Spectrum, poor quality TV image and the use of non Sinclair fonts in printed listings.

Somewhere along the programming route I had entered a 1 instead of an lower case L. The difference in the characters were one pixel as shown below, suffice to say that really gave me the bug for fault finding and future computer programming.

#	and	##
##		#
#		#
#		#
#		#
#		#
#		#
#####		#####

LET 1 = 1(1\*LEN(K+1)) to give an example of how it appeared. Nowadays it is just my eyesight that causes this sort of problem.

*Still* a reminder:

- ◆ *We are still seeking a volunteer for the role of Treasurer*
- ◆ *We are still seeking a volunteer for the role of Membership Secretary*
- ◆ *Or we are still seeking a volunteer for the role of both*
- ◆ *Please think about supporting QUANTA in a committee role*

*The Editor*

If you have QL-related news items that you'd like us to include on this page, please get in touch with News Editor - Dilwyn Jones at [news@quanta.org.uk](mailto:news@quanta.org.uk)

## SMSQmulator Update

Wolfgang Lenerz has announced two updates to this SMSQ/E based QL emulator designed to run on Java-equipped systems. The emulator is available in three versions – for Java 8, Java 7, or Java 6, depending on which is installed on your system. If unsure, Wolfgang recommends trying the version for Java 8 first and working your way down.



*Screen Shot of the Web Site heading*

Version 2.06 includes a bugfix for the xxx\_USE\$ keywords (e.g. print NFA\_USE\$(1)), which could completely crash the machine. Also, a primitive TCP device is implemented (no UDP, no SCK). Version 2.07 fixes a bug in the emulation core (which is why you should upgrade, says Wolfgang).

It is also possible to speed up some floating point routines - please see manual chapter VIII - Faster floating point routines for that.

Basically, new floating point routines based on Java “doubles”

QUO VADIS  
DESIGN

Independent Information  
Technology Services

www.ql-qvd.com

QL/QDOS/SMSQ/E Software

QUO VADIS DESIGN Independent Information Technology Services

QL/QDOS/SMSQ/E Software

Home Products Support Company Contact

Welcome

Quo Vadis Design sells software for the Sinclair Quantum Leap computer (QL) and variants including a new OS called SMSQ/E.

The QL is a computer in its 25th year Anniversary.

For more info: [www.ql-qvd.com/ql](http://www.ql-qvd.com/ql)



Software emulations of the QL now exist which run on a PC/Mac with Windows/True or Mac Operating systems.

News

- QVD QL News Blog - keep up to date  
[News Blog](#)  
24/04/2009
- Quo Vadis Design Website Launched  
21/02/2009

FEATURED PRODUCT



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**QPC2 IS NOW FREE AND  
AVAILABLE FROM MARCEL  
KILGUS WEBSITE**

<http://www.kilgus.net/qpc/index.html>

**Congratulations to Marcel  
on becoming a Father**

**Check the QL News Blog on  
our website for updates.  
[www.ql-qvd.com/blog](http://www.ql-qvd.com/blog)**



should see a 3 or 4 fold increase in most routines involving floating point numbers. The operations that have been sped up are: addition, subtraction, multiplication, division, SIN, COS, TAN, COT, squaring, doubling, halving, square root and reciprocal (1/x).

However, a minor drawback is that Java doubles are based on IEEE 64 bit double precision numbers, with exponents coded in 11 bits as opposed to SMSQ/E exponents which use 12 bits, so the extreme limits of values are reached faster than for SMSQ/E, hence why you can choose which to use via configuration of the emulator.

## **Site Search Tool**

By popular request (well, OK, it was Wolfgang Lernerz who asked)

My website at [www.dilwyn.me.uk/index.html](http://www.dilwyn.me.uk/index.html) now has a site search box.

When my site became as big as it is now, it became increasingly hard for people to find what they wanted on it (difficult even for me!), so courtesy of a free service provided by a company called SiteLevel.com, I added a search box facility which will search the site for a given keyword.

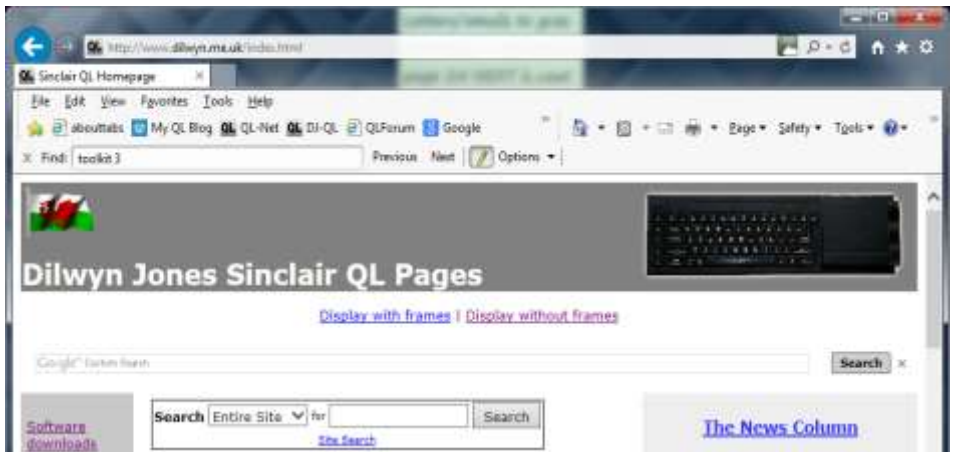
You can search the entire website, just downloads, or just documents at the moment.

It is capable of a high degree of customisation which will take time for me to get used to in order to optimise it. It also displays adverts on the search results page, a price worth paying for this facility I hope.

Between the Google Custom Search Engine searching for QL-related web page results and now this search box searching my own site, I hope it makes it easier to find things on my website.

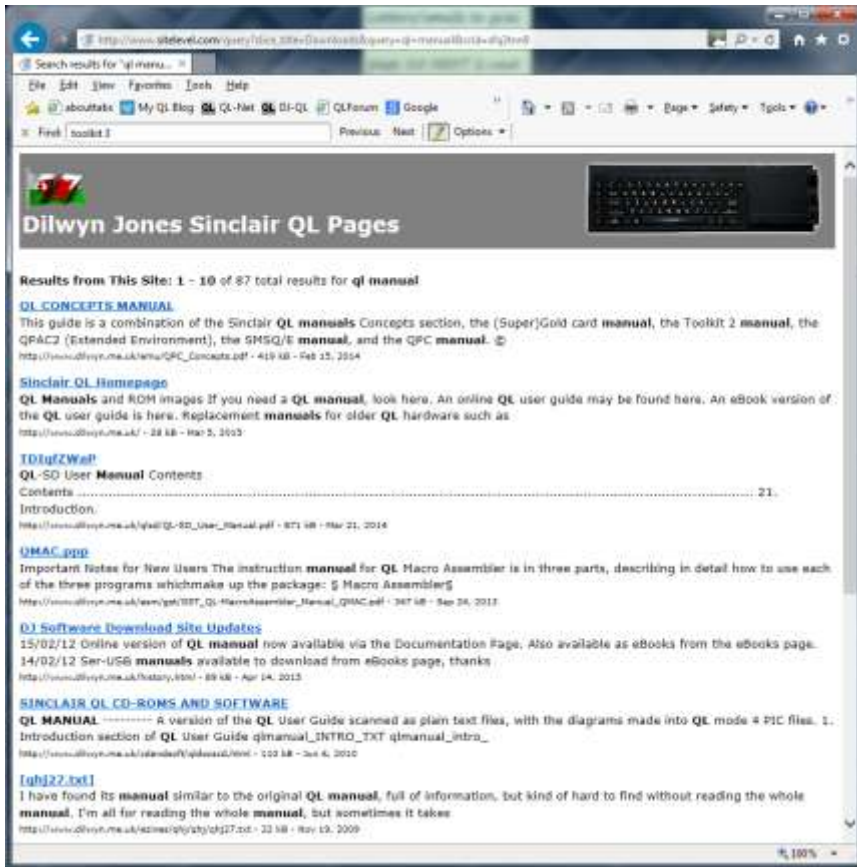
Please let me know of any problems you encounter - one I already know of is the link title when it finds results in PDF files, I have no idea what is happening there!

Two versions of the Site Search tool are on the page – the one at the top depends on JavaScript being active on your browser. Further down the page there is an HTML version which tries to work without relying on JavaScript.



*The site search box*

To use the site search, select which type of search you want (entire site, downloads only or documents only, then enter the search term in the second box. Keep the search term as simple as possible. A page of results then appears, from which you can select the most appropriate result.



*Search results sample page*

## **Lear PCB Design 7.37**

Malcolm Lear continues to update his PCB Design software, with the latest release being version 7.37 as of early June 2015.

Here is a list of revisions in the latest couple of releases. A full list of updates is available in a file called REVISIONS.TXT included with the download zip file.

**Version 7.36:** Corrected edit segment position on predefined components. This only becomes an issue when in library unlock mode.

Implemented bomb sight in PDF and Postscript export and corrected its clearance on Gerber export. Note the bomb sight will still likely be depreciated and its use is not recommended, use corner markers for DIY boards and/or routing edge outlines for professional manufacture.

Corrected checks to ensure 'edit break' cannot be performed on components which could have resulted in a non recoverable system crash.

Gerber export Readme.txt format updated.

PDF background now requires that the routing edge have an ID/reference of 'bg' or 'BG'.

More debugging on edit mode entry for predefined components. 'Drill Layer 1' option now only functions in NC Drill export, not Auto Gerber as was originally intended.

Corner Marker has been modified so the cursor is positioned correctly when it is first selected.

**Version 7.37:** File checking improved.

Layer check on new text, track and pad now copes with layer zero. Gerber export filename layer number has leading zero added.

## **QXL Cards**

Back at the end of March Derek Stewart (of D & D Design who manufactured and sold the Q60) posted on QL Forum that after getting someone to program some Altera chips he was able to produce up to 8 QXL cards (these are QL emulator boards which

plug into ISA slots on older PCs):

*“I have 8 QXL Cards, which I had someone with the Altera hardware, programme an Altera Chip for each. I have assembled 3 x QXL cards, one was shown at Edinburgh in a 486 PC, running very well. I have to sort out a software disk with SMSQ + SMSQ/E and a support disk. I will post these for sale on Sellmyretro.com and cross post here.”*



A QXL card

### **Toolkit 3 now freeware**

After 25 years, Martin Berndt has given permission for Toolkit 3 to be made freely available.

This toolkit is intended to enhance the SuperToolkit II (QJump/ Tony Tebby) by providing many new facilities and making some

of its old facilities even more powerful. Most of the extensions will work properly without Toolkit 2 if required.

A plain text file manual is provided with the download.

Command sections included:

- File maintenance and information

- Loading and executing binary files

- Job control

- Channels

- Keyboard queue access

- Memory management and access

- SuperBASIC programming and editing

- Database handling (save, load and sort arrays)

- General extensions to SuperBASIC

- Extended device drivers and a MEMORY device

Toolkit 3 may be downloaded free of charge from :

<http://www.dilwyn.me.uk/tk/index.html>

## **DataDesign Programming Manual**

Wolfgang Lenerz has made available a readable version of the DATADesign programming API. The manual is available in both .odt and .pdf versions. They can be found on his website:

[www.wlenerz.com/QLStuff/](http://www.wlenerz.com/QLStuff/)

## **Qtop**

QTop is a front end system for QDOS computers. Formerly a commercial product from Cowo in Switzerland, this is now freeware. This is the last official release, version 1.23, from 1995.

Does not require the pointer environment, but works well with it if present on your system. Includes the QTop-Desk (the actual system front end), QTop-Clocks, QTop-Demos, QTop-Animator, QTop-Index and QTop-Snap.

Download it from <http://www.dilwyn.me.uk/frontend/index.html>

## **QDT**

Urs Koenig has let us know that QDT is now freeware and a copy of v1.10r is on “QL IS 30 2014 - THE DISTRIBUTION” :

<http://sinclairql.net/repository.html#TheDistribution>

(see below for more on “The Distribution”). In addition to the full installation package there’s a preconfigured \*.win for use with QPC2 and SMSQmulator.

Alternatively, download QDT from:

<http://www.dilwyn.me.uk/frontend/index.html>

## **QL Games CD Updated**

Version 1.02 of the QL Games CD has been released. The number of packages included has now gone over 250, a significant rise on the 150 or so in the original version of the CD.

While some of the new games are fairly simple ones written in SuperBASIC, others have been added as a direct result of the work done by the QL Preservation Group who have been working quietly in the background to secure permissions to release some older software as free software.

# RWAP Software

We have been working hard to safeguard the future of the Sinclair QL through creating an online QL Wiki backed by a repository of QL titles.

The QL Wiki enables people to see what software and hardware was produced for the Sinclair QL. The repository enables people to purchase working copies when their microdrive cartridges fail, or they move onto disks or emulators. Where we can, we obtain permission from the copyright holders to re-release items on the market.

This has enabled us to bring some of the titles back to the market as well as re-kindle interest in the Sinclair QL and its emulators.

Old favourites brought back to life include:

E.V.A., Vroom  
Black Knight, Double Block  
Jungle Eddi, The Lost Pharaoh  
Pangl, the Lonely Joker  
Microdeal's Flight Simulator, QL Hopper, The King,  
Night Nurse and Cuthbert in Space  
Mortville Manor, Darkside of the Moon [£10]

We still retain our existing catalogue, including:

Open Golf, Return to Eden,  
Stone Raider II, The Praws,  
Hoverzone, Lost Kingdom of Zkul,  
Deathstriks, Nornarday,  
Flightdeck and QWord

All games are available on disk or for use with Q-emulator on the PC **from ONLY £5 each**

Microdrive versions also available - from £10 each.  
*Memory / system limits may apply - please check before ordering.*

Visit the QL Wiki for more details on software, books and hardware for the Sinclair QL:

[www.rwapadventures.com/ql\\_wiki](http://www.rwapadventures.com/ql_wiki)

**RWAP Software**  
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Email: [rich@rwapservices.co.uk](mailto:rich@rwapservices.co.uk)

Website:  
[www.rwapsoftware.co.uk](http://www.rwapsoftware.co.uk) or [www.sellmyretro.com](http://www.sellmyretro.com)



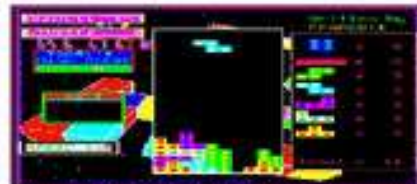
Vroom by Pyramide



E.V.A. by Westway



Mortville Manor by Pyramide



Double Block by Francois Lanleut



Night Nurse by Microdeal



Examples of the new titles added are a mini Pacman, Puissance, Noughts and Crosses, Eliza, Mah Jongg, Crash, Acey Deucey, Snake Byte and Moulin.

The QL Games CD is available from

Quo Vadis Design [www.ql-qvd.com](http://www.ql-qvd.com) , [SellMyRetro.com](http://SellMyRetro.com), or direct from Dilwyn Jones at a price of £5.00 (contact Dilwyn Jones for PayPal payment details).





One of the pictures Urs took using his iPhone of QPC2 running on the Windows 10 Technical Preview – see further pictures at:

<https://onedrive.live.com/?cid=C250D8748980CE5A&id=c250d8748980ce5a%219586&sc=photos&v=3>

## **E.A.S.E. and GigaBasic**

After our esteemed editor managed to make contact with the authors of Giga-Basic and E.A.S.E. (Easily Applicable System Environment) I have been able to make the software and manual for Giga-Basic available to download free of charge from my website.

Giga-Basic provides over 70 commands and functions, making it a useful extension for the QL. Covers the areas of graphics, sprites, base conversion, full screen basic editor, direct access to medium, multitasking clocks, mouse driven screen orientated menus, pull-down menus, multitasking control commands, programmable function keys and so on. Download from:

<http://www.dilwyn.me.uk/program/index.html>

EASE: Also known as Giga-Desk, E.A.S.E. (or Easily Applicable System Environment) is a user interface for the QL, it supports a desktop environment, described by the original publisher as being "similar to GEM". It includes pulldown menus, icons, really scrollable windows, a calculator and a game.

This program enables the user to have access to all system functions in an easy manner. Can be used with the Giga Soft Mouse originally sold by ABC Elektronik.

<http://www.dilwyn.me.uk/frontend/index.html>

Both packages were originally sold by Giga-Soft and the authors are André Claaßen and Gerd-Uwe Neukamp  
E.A.S.E. is available on:

<http://www.dilwyn.me.uk/frontend/index.html>

Giga-Basic is available on:

<http://www.dilwyn.me.uk/program/index.html>

Unfortunately I have no manual for EASE, so have put a couple of reviews up as background information.

## **Computer One Assembler**

Tony Cheal has let us know that the Computer One Assembler can be released as freeware, in addition to the Computer One Monitor which he also wrote.

It is available to download from my website:

<http://www.dilwyn.me.uk/asm/index.html>

Sadly, I don't yet have a manual for the assembler – can anyone help with that?

## **The Distribution**

On 29<sup>th</sup> April, Urs König of COWO Enterprises LLC announced the release of QL IS 30 2014 - THE DISTRIBUTION for public download. The Distribution is the successor to the QL Today 2013 The Final DVD which was sent out to subscribers in September 2013 with The Final Issue of the QL Today magazine.

The new version holds everything which was on the DVD, but has been carefully updated and supplemented with new material - Urs has been able to add some real long lost gems and an exclusive new release of a formerly commercial package, QDT the ultimate QL desktop - created or preserved during the last few months. There is also a copy of the Q-Top front end for QDOS systems. Plus copies of the Prospero Software compilers Pro Pascal and Pro Fortran.



*QL Is 30, The Distribution dvd*

Altogether there are 4.7 GB of QL related documents, software and pictures on this distribution. Preconfigured QL emulators for use

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EMail: SMSQ@J-M-S.com

**SMSQ.J-M-S.COM**

Thanks to Marcel, QPC2 is now freely available.  
You can download it from Marcells homepage

**www.Kilgus.net**

If you wish to print from QPC2, then you need

**QPCPrint**

... which is available from J-M-S.

Only 39.90 if you choose EMail delivery.

For additional 4 EUR, delivery will be on CD.

QPCPrint will allow you to print to (more or less) every printer which is installed under Windows (dot matrix, ink, laser, PDF "printer", FAX "printer" etc.)

You can place your order via letter or use the SSL order form on SMSQ.J-M-S.COM - click on "Online orders".

If you order by Mail or through the SSL contact form: We now accept VISA, MasterCard, Diners Club, JCB, Discover, UnionPay, BCard, DinaCard and American Express!

The order form has not been updated for the new card types at the time I write this ad, but it will be updated soon.

I am still working on changing the forms and implementing SEPA on all the order forms.

under Windows, Mac OS and even Linux make it easy to bring the QL (back) to your desk. Great ways to (re-)start programming for the QL or using QL programs.

QL IS 30 2014 - THE DISTRIBUTION is free which means it can be downloaded, used and given to friends by anyone at no cost. QL forever!

Download it as a zipped file from <http://www.sinclairql.net/> - scroll down to the 'QL Is 30 2014 – The Distribution' link and click on the zip file called THE\_DISTRIBUTION.zip. Warning: this is a very large file, over 3GB in length. AT the time of writing, latest version of The Distribution is v3.02

## **Elite Demo**

The Charvel Soft 3D and Elite Demos by Dave Halls Barker, Robert James Nash and Mark Handley are available to download from <http://www.dilwyn.me.uk/demos/index.html>

These are impressive graphical demos – you can see a video of them on YouTube at:

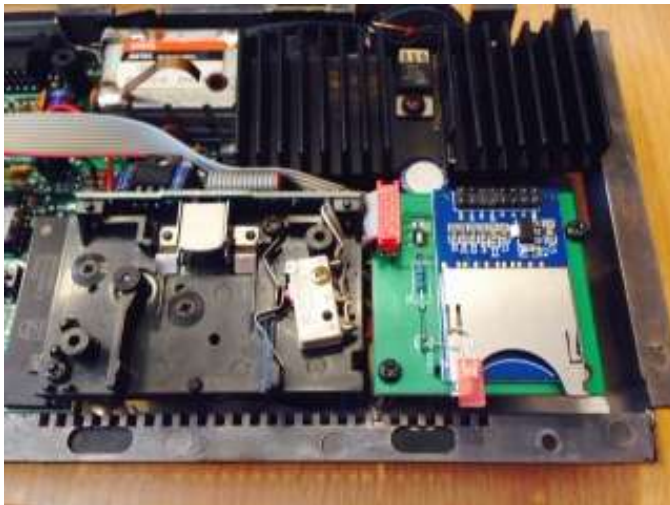
<http://www.youtube.com/watch?v=eYoTSGvWf78>

## **QL-SD New Feature**

With the first production run of QL-SD boards now coming to an end, Paul Veltjens is producing a new PCB which Paul says “doesn't look as cute but is easier to produce”. The new boards will feature the “disable” switch option, which allows the QL-SD board and hardware registers to be disabled, so that for example the ROM port can be used without having to open up and dismantle the system.

The new interface is identical in features and has a shielded SD Card holder with push-push mechanism.

As before, the new QL-SD boards will be available via SellMyRetro.com – go to [www.sellmyretro.com](http://www.sellmyretro.com) and search for “ql-sd” (without the quotes). The cost is £50.00 plus postage.



*Pictures of the new version of QL-SD*



Paul also reminds us that his 512K RAM cards are still available from SellMyRetro.com at a price of £40.00 plus postage.



*The 512K RAM card (picture from SellMyRetro.com)*

## **FDI Device Driver**

Martin Head has released two new versions of his FDI floppy disk image device driver.

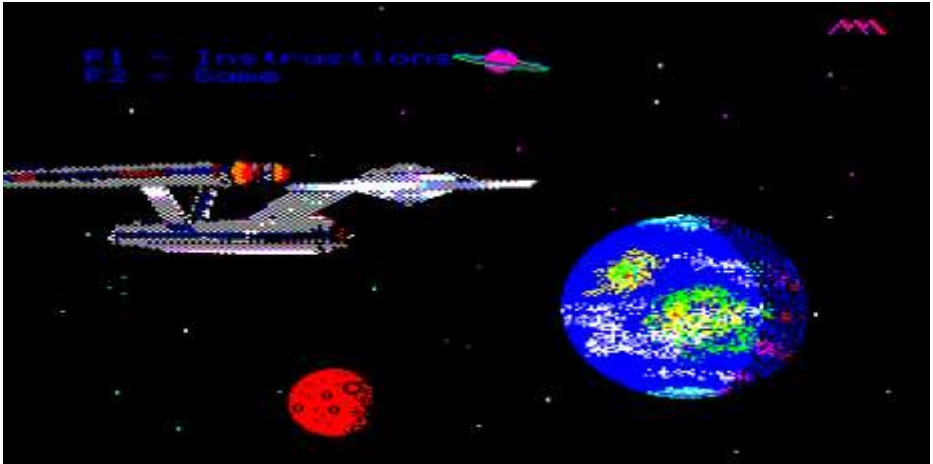
Version 1.04 does not have anything particularly new, mainly a bug fix for a possible system crash. The QDOS zip file just contains the the code files for a RAM and ROM based version of the driver, along with an updated readme file.

There is a new version 2 Floppy Disk Image device driver (FDI2) which is an upgraded rewrite of the original device driver. This one is based on the SMSQ/E device level three driver, and supports Single to Extra High density disk images, Sub-directories, and most device level three features. But not DOS disk images.

Download from <http://www.dilwyn.me.uk/utills/index.html>

# Star Trek Game

Phasers, Klingons, Shields, Warp Engines, Photon Torpedoes, yes it must be the classic game of Star Trek. Updated by Tomas Kral in 2015, this update of the game is supplied to run from two Microdrives (supplied as separate zipped files), although it can be run from disk with an FLP\_USE command.



*Screen dumps from Star Trek*

Unfortunately, it will only run on systems where the screen address

is the same as that of the original QL, decimal 131072 - try starting an emulator in QL compatible 512x256 screen mode for the best chance of compatibility. The boot file lets you choose whether or not to start the instructions job as well as the game itself. The game will run on a 128K RAM QL.

Download from <http://www.dilwyn.me.uk/games/index.html>

## **ZX-Team Meeting 2015 Mahlerts, Germany**

A - if not THE - Sinclair Weekend of 2015 which took place between Friday April 17th and Sunday April 19th 2015. A 20 minute video of the meeting is available to view on YouTube:

<https://www.youtube.com/watch?v=E1Xxrx0OvUQ&list=PLQHAWWG2O0e07DIIsMe0PAGH0GSDEHPOmn>

## **Ian Burkinshaw Hardware Documents**

There is now a page for hardware based project articles from Ian Burkinshaw on my website. These are mostly articles which appeared in QL Today magazine.

There are articles about QL emulation I/O (Input/Output), GPS projects, RS232 monitor, an I2C series, using PAR ports for other uses than just for printers, a review of a PS2 mouse port project, and driving up to 8 radio control servos from a serial port.

It can be found at :

<http://www.dilwyn.me.uk/docs/hardware/IanB/ianb.html>

**F**or a second year we held the Annual General Meeting with electronic access by Skype. With the local QUANTA membership attending, proxy votes and skype attendance there were eighteen (18) attendees. It is encouraging that the Annual General Meeting attendance has not dropped in three years despite the membership reducing every year. It was encouraging to have Nigel Herring from Hull attend in person.

The Treasurer's report was accepted with no queries raised. The Committee thanked Mrs Armstrong for her work in auditing the accounts and for agreeing to remain as our Auditor. The Annual report was accepted. The membership report was accepted and the latest update is in this magazine. The Committee members were re-elected un-opposed, there being no new or additional nominees.

NEMQLUG are pressing forward with their workshop weekend in September, already the venue has been booked and the dinner has been arranged. Do not forget that anyone interested in the Sinclair QL and it's derivatives is welcome; it is not restricted to QUANTA or NEMQLUG members. Further information is in the NEMQLUG notice in this magazine.

**A**s usual, the Membership report presented to the AGM in April shows the Membership numbers at the end of the Financial Year (31<sup>st</sup> December). At this date it is not known how many of our members will renew their

membership whereas this update makes allowance for members who have not renewed their membership and also any new members we have gained. The table below also shows that the percentage of members taking the electronic Magazine (eMag) is still rising.

I have once again reduced the number of magazines printed and Committee are still discussing at what stage does the number of magazines printed become uneconomical. Obviously there is a considerable saving to be made for those members living overseas who take the eMag thus not paying any postage.

## **QUANTA Membership** **Secretary's Updated Report for Year 2014**

As at 27<sup>th</sup> April 2015 the QUANTA Membership was made up as follows: (2014 year-end figures are given in brackets for comparison). Figures given as nnE denote the number of members taking the Electronic version of the Magazine. All other members take the Printed copy which is posted to their home address.

	<b>UK</b>				<b>OS</b>			
<b>Full Members</b>	54	22E	(67	31E)	16	13E	(25	0E)
<b>Associate Members</b>	4	4E	( 6	6E)	0	0E	( 0	0E)
<b>Honorary Members</b>	6	2E	( 7	2E)	2	0E	( 2	0E)
<b>Committee Members</b>	7	3E	( 7	3E)	1	1E	( 1	1E)
<b>TOTALS</b>	71	31E	(87	42E)	19	14E	(28	21E)
<b>Combined Total</b>	90	45E	(115	63E)				

14 new members joined during the period and offset the total losses of 39 to 25. The above table shows that overall membership

dropped by 25 (from 115 to 90) – a trend that was mentioned a few years ago at the AGM - and we have been notified that 2 of our members have sadly passed away plus 3 members who have resigned during the period.

39 members have not renewed their subscription and are additional to the above figures. None of these members have responded in any way to either Subs Due Notices or to further letters sent out to them. Their membership status is marked as “Lapsed” and these entries will now be removed from the Membership list.

## **MASTERMIND V1.2**

**LEE PRIVETT**

---

**T**he second part to MASTERMIND CHALLENGE to run correctly on QemuLator. As mentioned in the previous article, some changes to the program were necessary. This was due to errors that went unnoticed (or ignored) by the BBQL which became apparent when tried on QemuLator. These have been tested and the program now works correctly as originally intended (with some minor improvements). This program is also available for download from the QUANTA members only section of the “QL Forum” as a zip file from here :

<http://www.qlforum.co.uk/viewtopic.php?f=22&t=1281>

Continuing from Feb/Mar issue of the magazine, we now start with line after 2630, hence: (final part next issue)

**2640 REPEAT ScanKeyLoop**

```

2650   GetKey$=INKEY$
2660   IF GetKey$<>' ' THEN EXIT
ScanKeyLoop
2670   BEEP 50,500
2680   END REPEAT ScanKeyLoop
2690 IF GetKey$='y' OR GetKey$='Y' THEN
TheCompleteGame
2700 CLS
2710 AT 10,4:INK 0:CLS#0
2720 CSIZE 3,1
2730 PRINT'      THANKYOU & GOODBYE'
2740 END DEFINE EndOfTheGame
2750 :
2760 :
2770 DEFINE PROCEDURE DrawPat
2780   FOR F=50 TO 150 STEP 10
2790     FILL 1
2800     INK RND(200):CIRCLE F,10,4,3,0
2810     FILL 0
2820   END FOR F
2830 END DEFINE

```

# SMALL ADS

**\*FOR-SALE\***  
*Three spaces around a page or more in size (either blank or bordered) for keen amateur articles (MUST BE SEEN), three available are Comments, Programming, Reviews. Offers in excess of 100 words to the Editor*

**!!!Worried???**  
Don't worry about your spelling or grammar not being up to scratch, that is something we can correct or leave as necessary, the Editor's decision is final. Why not write a review, A review of a piece of hardware you have recently seen, obtained or bought that is related or used with the Sinclair QL. A review of a piece of Software you have bought or downloaded legally from a website that doesn't stick a virus on you system. Reviews of any other media such as books, magazines or even leaflets that other people may appreciate. Contact Mr Privett for details on how you can overcome your worry.

**WANTED**  
With FTC (Fleet Tactical Command) 1 having being found, I'm now trying to track down FTC II by Diren which is currently missing in action. I'm also after Top Team by Arunsoft which was a football management game. If you can help please contact Peter at:  
[peetvanpeebles@yahoo.co.uk](mailto:peetvanpeebles@yahoo.co.uk)

**### LOST ###**  
*The ability to do something positive, then submit something the editor, you know it makes sense.*

**£££ SPARE-TIME?**  
Earn yourself lots of gratitude with a certificate of thanks by contributing something to the magazine. We cant pay you £££s or ££s or even £ but what you will be doing will be rewarding in itself and you get your name in typeset style lights (without the lights bit). **Interested?**, then contact the editor of the magazine via the contact page inside the front cover. **Not interested?**, then contact the editor of the magazine via the contact page inside the front cover. We will be glad to hear from you.

**SHEDS SHEDS SHEDS**  
Shed loads of space for you to write or explore that SuperBASIC listing for the magazine. Short listings - any number that really explore a programming problem. Or even just for a bit of experimental fun. Long listings? No program is too big, no language too strange, no concepts too hard, no diagrams too complex, no anything too hard to understand. We accept listings in any language, any number of lines really, from just a few to a couple of pages, single or multiple procedures and functions. As long as you have written to either solve or explore a programming problem. Or even just for a bit of experimental fun. **Long** listings? No program is too big, no language too strange, whether its just concepts, SuperBASIC, block diagrams, Boolean logic, assembler, mnemonics (that's one for you George), C# C++ C- - or just plain C, Pascal, Fortran or even S\*BASIC, anything about everything would be appreciated. What if you don't know if your program listing is too long to be short or too short to be long? **NO WORRIES**, we accept medium listings too throughout the year so get writing **NOW!**  
Contact us in the usual way, so contact us **NOW!**

If you would like to place a small ad then go to page 2 for full details of how to go about it, options are for QUANTA members as well as non-QUANTA members.



```
2840 :
2850 :
2860 DEFine PROCedure MainGameSection
2870 REMark
*****
2880 REMark ges array gets its random
numbers
2890 REMark
*****
2900 ges(1)=INT(RND(1 TO level)):
DrawPat :BEEP
2910 ges(2)=INT(RND(1 TO level)):
DrawPat :BEEP
2920 ges(3)=INT(RND(1 TO level)):
DrawPat :BEEP
2930 ges(4)=INT(RND(1 TO level)):
DrawPat :BEEP
2940 INK 0:PAPER 7
2950 REMark
*****
2960 REMark un remark the next line to
```

test the program

2970 REMark PRINT ges(1),ges(2),ges(3),ges  
(4)

2980 REMark

\*\*\*\*\*

2990 FILL 0:BEEP 5000,200

3000 INK 0

3010 try=1:got=0

3020 REPEAT TRYING

3030 GUESS

3040 UPDATE

3050 TESTING

3060 IF got=4 THEN EXIT TRYING

3070 IF try>=10 THEN EXIT TRYING

3080 try=try+1

3090 END REPEAT TRYING

3100 END DEFINE MainGameSection

3110 :

3120 :

3130 DEFINE PROCEDURE TESTING

3140 REMark

\*\*\*\*\*

3150 REMark won???????

3160 REMark

\*\*\*\*\*

3170 LET got=0

3180 IF bla=4 THEN got=4

3190 END DEFine

3200 :

3210 :

3220 DEFine PROCedure GUESS

3230 REPEAT TURns

3240 FOR F=1 TO 4

3250 CLS#0:PRINT#0

3260 PRINT#0,' Your Guess For Row

';F:ro=25

3270 REMark

\*\*\*\*\*

3280 REMark get key make sure it is within  
confines

3290 REMark

\*\*\*\*\*

```

3300      REPEAT pol
3310          GetKey$=INKEY$
3320          a=CODE(GetKey$)
3330          IF a<58 AND a>47 THEN
ro=GetKey$:EXIT pol
3340      END REPEAT pol
3350      PRINT#0:PRINT#0,, 'YOU PRESSED
';ro;'      ':
3360      BEEP 400,80:PausingForAwhile
3370      BEEP 1000,50:PausingForAwhile
3380 REMark
*****
3390 REMark check for pressing 0 for 10
3400 REMark
*****
3410      IF ro=0 AND level=10 THEN LET
ro=10
3420      IF ro<=0 THEN LET ro=1
3430 REMark
*****
3440 REMark put guess into array

```

3450 REMark

\*\*\*\*\*

3460 row(F)=ro

3470 BEEP 500,20

3480 IF row(F)>level THEN row(F)  
=level

3490 PausingForAwhile

3500 END FOR F

3510 REMark

\*\*\*\*\*

3520 REMark confirm selection

3530 REMark

\*\*\*\*\*

3540

CLS#0:OPEN#4,scr\_:WINDOW#4,259,32,70,56

3550 PAPER#4,7:INK#4,2:CLS#4:CSIZE#4,0,0

3560 FOR Fww=1 TO 15:BORDER#4,Fww,2:END

FOR Fww

3570 FOR Fww=15 TO 6 STEP -

1:BORDER#4,Fww,2:CLS#4:END FOR Fww

3580 PAPER#4,7:PRINT#4,' Rows: 1 :

```

2      :      3      :      4      :
3590   PAPER#4,2:INK#4,0:PRINT#4,'  ';
3600   FOR F=1 TO 4:PRINT#4,'
|';:PAPER#4,col(row(F)):PRINT#4,'
';:NEXT F:PRINT#4,'  |'
3610   END FOR F
3620   BEEP 4000,100
3630   PRINT#0,'Is this correct, Yes(Y) or
No(N) ?':BEEP 5000,200
3640   REPEAT ScanKeyLoop%
3650   I$=INKEY$
3660   IF I$='y' OR I$='Y' OR I$='n'
OR I$='N' THEN EXIT ScanKeyLoop%
3670   END REPEAT ScanKeyLoop%
3680   FOR fo=1 TO 20:SCROLL#4,-1:BEEP
1000,10:NEXT fo
3690   IF I$='Y' OR I$='y' THEN EXIT TURns
3700   PAPER#4,2,7,3:CLS#4:CLOSE#4
3710   END REPEAT TURns
3720 :
3730 :

```

3740 REMark

\*\*\*\*\*

3750 REMark get row colours into t array  
(the guesses)

3760 REMark get actual colours into v  
array (the colours)

3770 REMark

\*\*\*\*\*

3780 FOR F=1 TO 4:LET t(F)=row(F):NEXT F

3790 FOR F=1 TO 4:LET v(F)=ges(F):NEXT F

3800 REMark

\*\*\*\*\*

3810 REMark check for black

3820 REMark

\*\*\*\*\*

3830 FOR check=1 TO 4

3840 BW\$(check)='.'

3850 IF t(check)=v(check) THEN

3860 BW\$(check)='b':t(check)=0:v  
(check)=99

3870 END IF

3880 REMark

\*\*\*\*\*

3890 REMark PRINT t(check),v(check),  
BW\$(check):PRINT

3900 REMark

\*\*\*\*\*

3910 END FOR check

3920 :

3930 REMark

\*\*\*\*\*

## RWAP Software

**Replacement QL Keyboard  
Membranes**

**Special Offer for Quanta Members  
£12 each plus post and packing**

**Quote "Quanta 2012 Offer"**


Post and packing:  
UK £2.50  
Europe £2.80  
Rest of World £3

Visit the QL Wiki for more details on software, books and hardware for the Sinclair QL:  
[www.rwapadventures.com/ql\\_wiki](http://www.rwapadventures.com/ql_wiki)

**RWAP Software**  
3 Dale View Court, Fulford, Stoke-on-Trent  
Staffordshire ST11 9BA  
Tel: 01782 398143  
Email: [rich@rwapservices.co.uk](mailto:rich@rwapservices.co.uk)

UK Cheques payable to "R. Mellor" or use PayPal.

Website:  
[www.rwapsoftware.co.uk](http://www.rwapsoftware.co.uk) or [www.sibmyretro.com](http://www.sibmyretro.com)



Why a bad keyboard membrane could change your whole career strategy!

Working to safeguard the QL for the future.  
[www.rwapsoftware.co.uk](http://www.rwapsoftware.co.uk)



```

3940 REMark check for white
3950 REMark
*****
3960 :
3970     FOR test1=1 TO 4
3980         FOR teen2=1 TO 4
3990             IF t(test1)=v(teen2) THEN IF
BW$(teen2)='.' THEN LET BW$(teen2)='w':LET
t(test1)=0:LET v(teen2)=99
4000         END FOR teen2
4010     END FOR test1
4020 bla=0:whi=0
4030     FOR F=1 TO 4
4040         IF BW$(F)='b' THEN bla=bla+1
4050         IF BW$(F)='w' THEN whi=whi+1
4060     END FOR F
4070 END DEFine GUEss
4080 :
4090 :
4100 DEFine PROCedure UPDate
4110 REMark

```

\*\*\*\*\*

4120 REMark draw the pegs

4130 REMark

\*\*\*\*\*

4140 FOR F=1 TO 4

4150 BEEP

4160 INK col(row(F))

4170 FILL 1

4180 ff=(try\*12)+(F\*5):LET hh=5-F:LET  
gg=30+(hh\*6)

4190 ff=ff-6

4200 ARC ff,gg TO ff+8,gg,-3.6

4210 ARC ff+8,gg TO ff,gg,-1:FILL 0

4220 INK 7:IF col(row(F))=6 THEN

INK 2

4230 ARC ff+1,gg+3 TO ff+3,gg+5,-1

4240 ARC ff+2,gg+3 TO ff+3,gg+4,-1

4250 END FOR F

4260 REMark

\*\*\*\*\*

4270 REMark set copies of place(white) and

correct(black)

4280 REMark

\*\*\*\*\*

4290 LET wht=whi:LET blk=bla:LET val=1

4300 BEEPer

4310 jum%= RND(10)

4320 IF jum%>5 THEN black:white:ELSE


white:black:END IF

4330 END DEFine UPDAte

## TSP UPDATE

STEVE POOLE

---

 have been trying to find addresses of computer groups who might be interested in the TSP, but cannot even find a single reference on the web. Is QUANTA the only amateur (Amateur? Ed.) computer club left out there? There would appear not to be a single press edition of a computer programming magazine in English. Even 'Dr. Dobbs' has ceased publication.

My own attempts to optimise the shrink code have so far failed, but I feel certain that it must be possible to greatly improve the code by using some clever array indexing.

No doubt a Professional mathematician would have some idea of what to do, but I have trawled Wikipedia etc., but there are no contact addresses! Perhaps I should add something to Wikipedia myself, but feel I am not sufficiently qualified to do so.

If you have any contacts who might be interested, please feel free to intervene. George Gwilt has finished recoding shrink in assembler, and no doubt he will be demonstrating it as and when he sees fit. It seems strange that in this age of everything computerised, that there is so little code published anywhere. And Barak Obama wants children to learn programming?

(Can anyone help at all? Ed.)

## QUANTA HELPLINE

DILWYN JONES

---

**M**embers wishing to submit helpline requests via email can use the email address [helpline@quanta.org.uk](mailto:helpline@quanta.org.uk) or if you prefer to use traditional post, please send the helpline request to me via the address printed inside the front cover of the magazine.

Obviously, we cannot guarantee to answer every query we receive, but we will do our best! Where we have been unable to answer the queries, we may print the help request as an open request in the magazine to ask if any of the readers can come up with a solution. And, of course, if readers feel that they have a better solution than we came up with, or would like to correct any errors we make, please write to us!

## Music

In this issue, I'll cover a response I gave to someone wishing to play music on the QL. Music (or as close as the QL gets) is programmed using BEEP commands. It can be difficult to relate BEEP command parameters to musical notes and note durations, so here's a quick guide.

## Relationship of BEEP pitches to musical notes

The QL BEEP command has a fairly complex relationship to musical notes, but it is possible to calculate the pitch and duration values to match to notes and lengths.

BEEP takes just two parameters to produce simple notes. The first, duration, takes a value from 0 to 32767, while the second, pitch, takes a value from 0 to 255 (inclusive). The lower the value, the higher pitched is the sound. A duration of 0 has a special meaning – play the note indefinitely. To stop a long note from playing, just use a BEEP command by itself, no parameters.

BEEP <duration>,<pitch>

gives a duration of <duration>\*72/1000000 seconds and a frequency approximately equal to  $11447/(10.6 + \text{pitch})$  Hz.

## Frequencies Of Notes In Even Tempered Scale With A=440Hz

Here is a table giving the frequencies in Hz of musical pitches. I've had to split the table into two to fit the page width. A '#' symbol represents a 'sharp', while the 'b' represents a 'flat'. The left hand column is the octave number. For example, middle C is C4.

	<b>C</b>	<b>C#</b>	<b>D</b>	<b>E<sup>b</sup></b>	<b>E</b>	<b>F</b>
<b>0</b>	16.35	17.32	18.35	19.45	20.60	21.83
<b>1</b>	32.70	34.65	36.71	38.89	41.20	43.65
<b>2</b>	65.41	69.30	73.42	77.78	82.41	87.31
<b>3</b>	130.8	138.6	146.8	155.6	164.8	174.6
<b>4</b>	261.6	277.2	293.7	311.1	329.6	349.2
<b>5</b>	523.3	554.4	587.3	622.3	659.3	698.5
<b>6</b>	1047	1109	1175	1245	1319	1397
<b>7</b>	2093	2217	2349	2489	2637	2794
<b>8</b>	4186	4435	4699	4978	5274	5588

	<b>F#</b>	<b>G</b>	<b>G#</b>	<b>A</b>	<b>Bb</b>	<b>B</b>
<b>0</b>	23.12	24.50	25.96	27.50	29.14	30.87
<b>1</b>	46.25	49.00	51.91	55.00	58.27	61.74
<b>2</b>	92.50	98.00	103.8	110.0	116.5	123.5
<b>3</b>	185.0	196.0	207.7	220.0	233.1	246.9
<b>4</b>	370.0	392.0	415.3	440.0	466.2	493.9
<b>5</b>	740.0	784.0	830.6	880.0	932.3	987.8
<b>6</b>	1480	1568	1661	1760	1865	1976
<b>7</b>	2960	3136	3322	3520	3729	3951
<b>8</b>	5920	6272	6645	7040	7459	7902

There is an article called Music on my website at:

<http://www.dilwyn.me.uk/docs/articles/music.zip>

which may prove of interest. The article originally appeared in QL Today magazine. The Sound page on my website :

<http://www.dilwyn.me.uk/sound/index.html>

contains some programs which might help too.

Try **Composer**, for example, which is written in SuperBASIC and lets you compose music. Or **Sounder** by Peter Hale, also written in SuperBASIC.

**PlayMusic** by Mark Swift shows how to store notes to play in DATA statements.

In the Turbo compiler demo routines there is a little routine by Simon N Goodwin to play musical tunes. Since compiled BASIC can be multi-tasking, music and sound effect routines can be compiled using Turbo or QLiberator) to play background music.

The only thing is that the QL has no volume control so short of

modifying the QL hardware to add some form of volume control, probably stuffing a sock around the beeper is as close to a volume control as we'll get!

Since notes made by BEEP continue to be played in the background, but there is no buffering system, you'll need to make sure that the first note is complete before the second starts otherwise the second deletes the first. I suggest use of the BEEPING function like this:

**REPeat playing**

**REPeat waiting : IF NOT BEEPING THEN EXIT**

**waiting**

**REM duration and pitch values can be**

**REM stored in DATA statements**

**BEEP duration,pitch**

**END REPeat playing**

If you have an interest in connecting a MIDI (Musical Instrument Digital Interface) music device to a QL, Simon Goodwin and Al Boehm both worked on software to allow a MIDI device to be connected to a QL via the network port. See the article about that at <http://www.dilwyn.me.uk/docs/articles/midi.zip> and the software itself may be downloaded from

<http://www.dilwyn.me.uk/sound/index.html>

# SUBGROUP INFORMATION

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## SUBGROUP MEETINGS

**S**ubgroup meetings are where QUANTA members and non-QUANTA members get together to discuss, tinker and explore all things QL related. As we are now approaching summer (ha!) the holiday season may provide some more sunshine and much needed warmth and probably more wind than usual (ahem!).

This might be a good opportunity to visit your local sub-group. If there is not a sub-group near you why not hold one yourself? Contact the chairman on how to go about it, details on our contacts page.

## LONDON QL AND QUANTA GROUP

**M**eetings are held in the School Room, which is the basement of the Borough Welsh Congregational Chapel, 90, Southwark Bridge Road, London SE1. This is almost opposite the junction with Marshalsea Road, at the other end of which, 5 minutes walk away, is the Borough Underground Station.

Free parking is easily available in Southwark Bridge Road for road users, Cyclists are welcome. Members currently each pay a subscription of £40 per year towards the cost of the hire of the hall and a small additional charge is made for tea/coffee - biscuits are then provided free. Please bring your QL equipment if possible, all types welcome, e.g., PC portable running emulators.

The Group has some systems stored at the venue for its use. In addition, there are lots of donated second user equipment, books, magazines, etc., available for purchase. Time: 2.00 pm. to 5.00 pm., on the second Sunday of the month. No meetings are held in December/January - winter break, or July/August –the summer break, giving 8 meetings a year. Malcolm Cadman 020 8691 5780 or email:

[QL@mcad.demon.co.uk](mailto:QL@mcad.demon.co.uk)



## SOLENT SUBGROUP

**M**eetings are at 'Sarisbury Green Parish Rooms' see ([http://sqpr.org.uk/?page\\_id=28](http://sqpr.org.uk/?page_id=28)) On the first Saturday each month from 1PM to 5PM. Contact Graham Evans 023 8040 3350 or email: [graham@grayfire.f9.co.uk](mailto:graham@grayfire.f9.co.uk)

## NEMQLUG - NORTH EAST MANCHESTER QL USER GROUP

**M**eetings are held at 181, Urmston Lane, Stretford, Manchester. M32 9EH (Near Junction 7 of M60 Motorway, which was Junction 7 M63 Motorway). Our informal meetings start at 7 pm. and finish at 11 pm. All welcome to our meetings which are held on the last Thursday of each month (except December). Contact John/Sarah Gilpin 0161 865 2872 for further details. or by email: [thegilpins@btinternet.com](mailto:thegilpins@btinternet.com)

## SCOTTISH QL USERS GROUP

**S**QLUG meets at George Gwilt's home every second Sunday in the month. Please contact George Gwilt before coming, to get the location by email: [Gdgqler@gmail.com](mailto:Gdgqler@gmail.com)

## SURREY QUANTA SUBGROUP (SQSG)

**T**he group is currently trying other venues in the Leatherhead - Epsom area. If you plan to attend but do not get our emails, please contact Ken Bain for the latest location. Meetings are 8.00 to 10.00 pm on a Wednesday, the last of each month (none in December), but this can vary. Contact Ken Bain 01932 347432 (to midnight), or email: [kenb@bcs.org.uk](mailto:kenb@bcs.org.uk)

## SUSSEX QL USER GROUP

**C**urrently without a meeting place, anyone interested should contact Roy Wood 01273 430501 or email: [qbranch@qbranch.demon.co.uk](mailto:qbranch@qbranch.demon.co.uk) or Keith Mitchell - 01903 742263.

# ***N E M Q L U G***

Invites anyone with an interest in the  
Sinclair QL Micro computer,  
its derivatives and emulators  
to a weekend workshop

On Saturday 26<sup>th</sup> and  
Sunday 27<sup>th</sup> September 2015

To be held at 3<sup>rd</sup> Davyhulme Scout Headquarters,  
Conway Road, Davyhulme, M41 0TZ

There will be a Chinese Banquet on Saturday night  
at a cost of £25.00, please book by 19<sup>th</sup> September  
There will be a large hall for exhibitors, with plenty of  
power points available

There is a separate room, if required, for anyone  
wishing to give a talk or presentation  
All day refreshments available  
There is car parking on site

Hotel accommodation is plentiful in the vicinity

*Contact Sarah Gilpin—Details on page 2*

**COPY DATE for AUG SEP 2015**  
**ISSUE is: 5th AUG 2015**

Please ensure that your copy reaches the editor on or before that date. Copy on Paper, Magnetic Media or by Email. Text & listings are preferred in ASCII format as text files, Microsoft™ Word Documents or in QL Quill formatted files. All graphic submissions in as high a resolution as possible, preferably in PNG format, other forms of submission can also be accepted, please contact the Editor for details.

All Contributions are Welcome  
Copy by Email to - [editor@quanta.org.uk](mailto:editor@quanta.org.uk)

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